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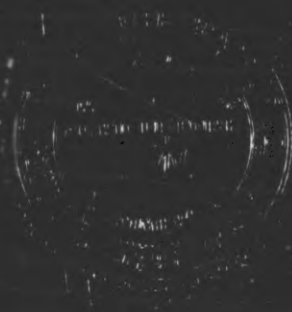
ABSTRACT

Tennessee's challenge for the future is to further change and revitalize the state's educational system by sustaining the momentum of the 1980s reform movements. Data collected during 1984-89 indicate that gains from school reforms are illustrated by improved standardized test scores, increased student readiness for college and work, a better system of postsecondary student assessment and improved development programs for school faculty as well as increased partnerships between schools and the private sector. The State Board of Education's Master Plan for Public Education, Grades K-12, identifies seven key result areas such as adult literacy, family/community involvement, and funding, and supplies objectives, strategies for objective accomplishment, ways to measure progress, and state initiatives required to bring about progress for each area. Five principles, including linking higher education to elementary education, make up the foundation for Tennessee's Master Plan for Higher Education developed by the state's Higher Education Commission. To provide a context for relating goals and developing long-range plans for educational reform, national demographic projections are given and these are followed by a series of predictions for Tennessee public education for the year 2000 and beyond. State requirements for high school graduation and undergraduate admission are given in appendices A and B. Appendices C and D list schools recognized for outstanding achievement. Three other appendices listing centers of excellence, centers of emphasis, and chairs of excellence, are also included. (EJS)

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**TENNESSEE PUBLIC EDUCATION:
FIVE YEARS OF ACCOMPLISHMENTS
AND
CHALLENGES FOR THE FUTURE**



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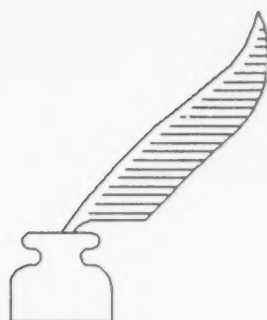
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FIVE YEARS OF ACCOMPLISHMENTS
AND
CHALLENGES FOR THE FUTURE**



**Annual Joint Report of
The State Board of Education and
The Tennessee Higher Education Commission**

January 26, 1990

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PREFACE

The Public Education Reform Act of 1984 (TCA 49-1-302) directs the State Board of Education and the Tennessee Higher Education Commission to provide jointly a report to the Governor and to the General Assembly, all public schools and institutions of higher learning, and their respective boards. The report is to be submitted not later than February first of each year and is to include, but not be limited to:

- A. The extent of duplication in elementary-secondary and postsecondary education;
- B. The extent of compatibility in high school graduation requirements and admission requirements of postsecondary institutions;
- C. The extent to which respective master plans of the State Board of Education and the Tennessee Higher Education Commission are being fulfilled; and
- D. The extent to which state needs in public education are being met as determined by such Board and Commission.

The Annual Joint Report for 1990, *Tennessee Public Education: Five Years of Accomplishments and Challenges for the Future*, was approved by the State Board of Education and the Tennessee Higher Education Commission on January 26, 1990.

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INTRODUCTION

Throughout the 1980's, leaders from government, education, business, and the general public, have been firm in their resolve to bring about changes ensuring all Tennesseans an equal opportunity to a good education. Preparing students, at all levels, to meet current and future challenges requires setting visionary goals and implementing innovative reforms to bring about desirable, measurable results. Tennessee has made substantial progress in many areas of educational reform over the past decade.

The challenge of the future is to change further and revitalize Tennessee's educational system. Education will play a broader role in the lives of everyone in the future than it has in the past; therefore, continued cooperation and commitment from all segments of society are imperative if we are to sustain the momentum of the 1980's. As we move from a manufacturing-industrial society to a service-information society, the tangible and intangible benefits of having a good education will steadily increase while the consequences of inadequate schooling will become more severe. We must ensure that successful programs continue and that new programs in highly sophisticated and technical fields are implemented. At the same time, we must rethink, refine, and restructure obsolete educational programs which do not produce graduates prepared to meet the demands of the high-tech, international society of today and tomorrow.

Our goal in Tennessee is to educate students to their greatest possible potential and instill in them a sensitivity to social issues, adherence to high ethical standards, and an enthusiasm for lifelong learning. To achieve this, we must have dynamic interaction and effective dialogue among individuals in the business community, education institutions, and government.

During the 1989 Legislative session, the Tennessee General Assembly established TENNESSEE CHALLENGE 2000, Public Chapter 133. This legislation cited the 1988 report released by the Southern Regional Education Board (SREB), *Goals for Education: Challenge 2000*. In response to this legislation and the SREB report, the Commissioner of Education, the State Board of Education, and the Tennessee Higher Education Commission are developing unique, visionary, and quantifiable statewide goals. The goals for Tennessee, preschool through postsecondary education, will be guided by, but not limited to, the SREB document and will complement goals being developed by the nation's governors and national educational leaders as a result of the President's Education Summit held in September 1989.

Embedded in the philosophy of "the annual report" is the idea that we need to step back now and then to look at where we have been, where we are now, and where we appear to be going. This *Annual Joint Report for 1990* of the State Board of Education and the Tennessee Higher Education Commission fulfills that philosophy by measuring progress made in the 1980's, providing current data and relevant information for the past year, and looking ahead to the 21st century.

ACCOMPLISHMENTS: 1984-1989

Leaders from the General Assembly, the Executive Branch, the state educational agencies, business and industry, and the public have demonstrated a renewed dedication to the improvement of education in Tennessee and a keen awareness of the central role education plays in shaping the future quality of life for the citizens of Tennessee and our nation. Change, which results in significant and measurable improvement, in any arena, is a constant process and, therefore, requires sustained attention, support, and review.

Tennessee has been recognized nationally for education reform during the 1980's. Initiatives implemented to improve the state's educational system have been closely monitored to determine their effectiveness. A unique and enviable partnership exists in Tennessee among those responsible for kindergarten through university education. Those responsible for major policy decisions affecting education in the state recognize that true reform requires strong leadership and support from those affected by the decisions. This report highlights areas where data are available to substantiate progress in elementary and secondary student achievement; student readiness for college and work; postsecondary assessment measures; partnerships with business, government, communities and families; and professional development for teachers and school leaders.

Elementary and Secondary Student Achievement

Preparation for academic success in high school and college begins in the early grades by providing a solid foundation in the basic skills, an appropriately sequenced curriculum through elementary and secondary grades, and early identification and intervention programs for those at risk of dropping out of school. Student achievement cannot be measured by one single indicator or test; however, the performance of Tennessee's students on standardized national instruments, such as the Stanford Achievement Test, the College Board's Scholastic Aptitude Test (SAT) and Advanced Placement (AP) Program, or the American College Test (ACT) assessment, indicates how well our students are doing by comparing their performance with that of students across the country. Tests such as the Basic Skills First Achievement Test measure the degree to which students have mastered Tennessee's curricula objectives. These data identify specific academic skills that need to be strengthened and reinforce the need for continued improvements.

Data collected since 1984 indicate that most changes made in educational programs in Tennessee have been successful and have resulted in improved performance of students. Continuation of these programs, with refinements where needed, will ensure graduates who are better prepared to enter postsecondary education or the workforce with little or no remediation. Highlights of some of the programs follow.

Over the five-year period of Basic Skills First (BSF) testing, 3rd graders have performed at a consistently high level of mastery. The most dramatic gains, however, have been made by students in the middle grades where scores have improved in five out of six areas over the five-year period from 1984-1989. The average percent of objectives mastered in 1989 and the gain in average percent mastered since 1985 are as follows:

	Reading		Mathematics	
	% Mastered	Gain	% Mastered	Gain
Grade 3	80	+ 2	82	+ 6
Grade 6	77	+12	66	+ 4
Grade 8	81	+10	66	- 3

The decline in mathematics scores for Grade 8 may be attributable, in part, to the addition of new instructional and test objectives to measure understanding of pre-algebra concepts.

Tennessee students scored above the national norm in most subject areas of the **Stanford Achievement Test**. Test results in 1989 for Tennessee school systems indicate that in 15 of the 16 subtests administered, student performance exceeded the national norm. Between 1985 and 1989, Tennessee's Stanford Achievement Test scores improved, often markedly, at all grade levels. The percentile rank of Tennessee students in 1989 and the gain in percentile rank since 1985 follow:

Subject	Grade 2	
	Percentile	Gain
Reading	76	+22
Spelling	95	+16
Mathematics	97	+28
Environment	90	+43
Listening	77	+28

	Grade 5		Grade 7	
	Percentile	Gain	Percentile	Gain
Reading	61	+21	54	+10
Language	70	+13	74	+8
Mathematics	78	+20	72	+21
Science	74	+23	63	+30
Social Science	56	+21	70	+11
Listening	46	+14	52	+11

Beginning in spring 1990, a new statewide testing program, the **Tennessee Comprehensive Assessment Program (TCAP)**, will measure statewide curricular objectives and provide comparisons to students nationwide. The test will be given to students in grades 2 through 8 and grade 10. Testing at each grade level will enable Tennessee to gauge progress from year to year for each student, school, and school system.

The College Board's **Advanced Placement (AP)** Program provides high schools a way to motivate students from diverse backgrounds to take college level courses for credit or advanced placement in college. The program has been effective in encouraging secondary schools to work with colleges and universities to raise student achievement and improve curricula. Annual examinations assess the performance of the students who have taken the more rigorous courses. Following are trends for the nation, the Southern Region¹, and Tennessee for the AP Program:

	Total Exams 1984	Total Exams 1988	Increase
Nation	170,674	324,755	90%
Region	42,683	101,848	139%
Tennessee	2,165	4,516	109%

	Candidates 1984	Candidates 1988	Increase
Nation	129,308	226,021	75%
Region	33,426	71,359	113%
Tennessee	1,713	3,396	98%

¹ The Southern Region includes Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

Note: Because some students may take more than one exam, the number of examinations exceeds the number of candidates. "Candidates" represent all students in grades 10-12 who took AP exams.

Students who earn grades of three or higher on the five-point AP scale may earn college credit or advanced placement in a wide array of subjects, from art to physics. The percentage of public school students taking the AP and scoring 3-5 on 1988 exams follows:

Nation	Region	Tennessee
66%	61%	60%

As measures of developed academic abilities important for success in college, the Scholastic Aptitude Test (SAT) and American College Testing (ACT) scores are useful in making decisions about and in assessing the academic preparation of individual students; however, using the scores in aggregate form as a single measure to rank or rate teachers, educational institutions, districts, or states is invalid because the data do not include all students. In Tennessee, for example, only 12% of college-bound seniors from the Class of 1989 took the SAT while approximately 65% took the ACT. The SAT is not required, and those who choose to take the test are typically high achieving students. The ACT is required, however, of all high school seniors who apply for admission to Tennessee's public colleges and universities. Whether a student takes the ACT or the SAT depends on what is required for admission by the college or university to which the student is applying. The SAT measures general verbal and quantitative aptitudes, while the ACT is more subject-matter oriented. The results of student performance on these national assessment instruments is, however, useful as an indicator to education officials, legislators, and the public in tracking progress toward attaining established educational goals.

National average scores for the high school class of 1989 on the College Board's Scholastic Aptitude Test (SAT) have shown little change over the ten-year period, 1979 to 1989. For this same period, Tennessee students' scores have changed little but have remained above the Southern Region and the national averages.

	1979		1989		Percent Change	
	verbal	math	verbal	math	verbal	math
Nation	427	467	427	476	0%	1.93%
Region	410	444	418	456	1.95%	2.70%
Tennessee	472	510	486	523	2.96%	2.55%

Note: The scores for the Southern Region have not been broken out by regions since 1985; therefore, the percent change for Region is based on the period from 1979 through 1985.

The average American College Testing (ACT) composite score of the four subject areas--English, mathematics, social studies and natural sciences--earned by Tennessee students graduating in 1989 was 17.9; this is less than the 18.6 average composite score earned by students nationwide, but slightly higher than the 17.8 average earned by students in the Southeast Region². For the past five-year period, scores have fluctuated only slightly nationwide, regionally, and in Tennessee. The average composite score has increased in Tennessee over this period from 17.6 to 17.9.

² The Southeast Region includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia.

Year	Nation	Region	Tennessee
1985	18.6	17.5	17.6
1986	18.8	18.0	18.0
1987	18.7	18.0	18.0
1988	18.8	18.0	18.0
1989	18.6	17.8	17.9

The relationship between student performance on the ACT and courses taken in high school remains strong. More than half of this year's high school graduates across the nation indicated they took a core high school curriculum, continuing a trend first noted in 1986. In Tennessee, the same trend has been noted with a substantial increase in the number of first-time, full-time college freshmen who indicate they completed the recommended years of high school study in the basic academic areas. In 1986, of the 22,872 Tennessee students who took the ACT, 6,396 (27%) indicated they took a core high school curriculum; of the 20,732 students who took the ACT in 1989, 11,175 (53%) indicated they took the core curriculum.

The average score of Tennessee students has been above the national and southeastern average in English on the ACT for the last 5 years, (1985, 1986, 1987, 1988, and 1989).

Student Readiness for College and Work

The challenge for Tennessee, in what has come to be called the "information society," is to provide a first-rate education to everyone. Indeed, it is essential to the personal dignity of the individual and to the economic security of the state that students enter today's rapidly changing workplace with the skills necessary to read and comprehend with ease, to calculate accurately, and to apply this knowledge to solving problems. Tennessee's public schools and institutions of higher education are working together to ensure that the challenge is met.

Many of the reforms adopted in Tennessee to strengthen education are aimed at improving the preparation of high school students for college-level work and for successfully entering today's skilled workforce. Increased high school graduation standards (Appendix A), high school honors diplomas, improved vocational education programs with solid academic preparation, university admission standards which require a solid core of high school academic courses (Appendix B), college placement tests to determine student readiness, and feedback to the high schools from the colleges and universities on student performance at the college level are a few of the programs Tennessee has implemented. Results of these reforms include the following:

The State Commissioner of Education provides an annual **Commissioner's Report Card** on school systems. The report card for each school system contains several important indicators of school operations and success. The report cards are sent to each school system and provide an accounting to the local community of how the school system is doing.

Progress has been made in increasing the percentage of students who enter the 9th grade and who remain in school through the 12th grade from 74.7% in 1984-85 to 75.5% in 1988-89. This has been accomplished at the same time high school graduation standards have increased. Of those who complete the 12th grade, about 7% do not graduate, but more than one-half of these students will receive a diploma within the next year. Many students who leave school before graduation will later take the General Educational Development (GED) test. Currently about 9,400 Tennesseans of all ages take the GED each year and earn a high school equivalency credential on the basis of their test results.

Tennessee's K-12 curriculum frameworks set forth expectations about what students ought to know and be able to do. Curriculum frameworks and guides have been developed or revised since 1984, and they are consistent with the basic academic competencies established by the College Board in 1984. Subject areas include fine arts, foreign language, mathematics, science, language arts, social studies, and computer technology. The state vocational education policy emphasizes the application of basic academic skills, career orientation, job relevant skills, and preparation for advanced education. Curriculum frameworks and guides have been developed in the following vocational subject areas: business and office education; health occupations; industrial technology; marketing education; trade and industrial education; vocational agriculture; vocational home economics; and the vocational improvement program. Pilot vocational education courses emphasizing mathematics, science, and communications skills have been highly successful. The pilot courses include areas of studies such as principles of technology, math for technology, communications for technology, and general science (agriculture).

The **Tennessee Proficiency Test** is designed to measure minimum skills in mathematics and language arts that students should possess upon graduation from high school. Students take the test for the first time as ninth graders and may retake the test as often as necessary to achieve passing scores. In 1989, 90% of ninth graders passed the mathematics portion of the test and 78% passed the language arts portion. The percent of students passing both portions was 76% (an increase from 70% in 1984). The percentage of Tennessee students failing the test while in the twelfth grade was 0.9% in 1989.

The **Governor's Schools** for rising high school juniors and seniors who are gifted and talented are held each summer on college campuses in the areas of the arts, sciences, humanities, international studies, and Tennessee studies. A total of 3,450 students have attended the Governor's schools since the summer of 1985.

The **honors diploma** is an indicator of students taking more rigorous courses while in high school and achieving a grade point average of 3.0 or above. The number of students receiving honors diplomas has increased from 701 (1.4%) high school seniors in 1985 to 4,401 (8.5%) in 1989.

Since 1989 is the first year of the new **public college and university admission requirements**, data to evaluate long-range results are not yet available; however, we do know that dramatic changes in course-taking patterns of high school students are taking place. Total enrollment in high schools has changed very little (down one-tenth of one percent) since 1982, but enrollment is up in the following areas of the core curriculum critical to the revised standards:

<u>COURSE</u>	<u>PERCENTAGE INCREASE</u>
Visual and Performing Arts	23%
Algebra	41%
Geometry/Advanced Math	116%
Natural/Physical Science	44%
Social Studies	65%
Foreign Language	138%

Contrary to what was expected for fall 1989, the enrollment increased at Tennessee colleges and universities at the largest percentage since 1975. Overall, full-time equated (FTE) enrollments were up six percent and headcount enrollments were up eight percent. Reflected in numbers, the increase was 6,924 FTE. The majority of

these students, 88.6%, met the 1989 admission standards. Another 8.5% lacked one unit, and only 2.9% lacked more than one unit. According to data available, no student was denied admission due solely to the increased admission standards.

Colleges and universities work with high school guidance counselors, teachers, parents, and students to ensure awareness of and preparation for meeting the revised admission requirements. The higher education institutions analyze and report the performance of first-time freshmen to the high schools from which the students graduated. The performance of the students during the first year of college provides data needed by the high schools for planning purposes and for assessing the strength of their academic programs.

According to data from American College Testing (ACT), the 12,479 first-time freshmen entering Tennessee public universities in Fall 1989 scored in aggregate 19.7 on the ACT, a slight increase from last year's freshmen in aggregate score of 19.4 and slightly above last year's national in aggregate score of 19.3. This is a significant improvement when compared to Fall 1984 when freshmen entering Tennessee public universities were less prepared in aggregate (scoring 18.5) than average freshmen entering public universities nationally (scoring 18.9).

The Tennessee Academic Scholars Program, administered by the Tennessee Student Assistance Corporation, is an endowment program which provides \$4,000 scholarships (\$2,000 from the state plus \$2,000 matched by the institutions) to outstanding high school seniors who enroll in one of the state's public or private colleges or universities. The first awards were made to 13 scholars in 1986; in 1989, there are 50 students in the program. The academic achievement levels of these young people average in the 99th percentile nationally and serve as evidence of high quality programs, dedicated teachers, and determined students in our public schools across the state. The long-range goal for this program is to award scholarships to the top one-hundred graduating high school seniors each year. Research indicates that students who attend college outside Tennessee are not likely to return home when they enter the workforce; therefore, education officials and legislators believe the scholars program is a good investment in the state's economy.

Postsecondary Assessment Measures

The quality and effectiveness of our public educational programs in Tennessee have been top priorities for everyone involved in establishing new initiatives during the 1980's. The differences in the missions of the public schools, colleges, and universities were considered as assessment standards and accountability measures were implemented. Heavy emphasis has been placed on student learning and performance outcomes in developing the standards by which we measure our progress. Some examples of statewide assessments used to measure the level of general education attained by students completing associate and baccalaureate degree programs and the proficiency of students completing professional fields of study follow.

The American College Testing/College Outcomes Measurement Program (ACT/COMP) is an assessment instrument used to determine the level of general education attained by students earning associate and baccalaureate degrees. All public institutions of higher education in Tennessee administer the ACT/COMP in order to monitor student learning and performance outcomes. Since 1984, there has been a steady increase in the results:

Year	Students	Mean Score
1984	4,001	184.8
1988	8,779	185.2
1989	9,862	185.3

The graduation rates of Tennessee students who earn baccalaureate degrees in six academic years from the date of initial enrollment has declined slightly, following a national trend.

Years	Students	Mean Score
1978-84	13,115	40.49
1982-88	13,370	40.94
1983-89	13,075	40.48

Tennessee students at the public universities take national examinations for licensure or certification in three major undergraduate fields: teacher education, engineering, and nursing. Performance of our students on the national assessment for teachers shows significant improvement since 1984 with scores above the national norm. The trendline on student performance on the nursing and engineering instruments for Tennessee students does not differ significantly from the national trends.

National Teachers Examination (NTE)		
Year	Students	Mean Score
1984	1,430	1973
1988	1,495	1988
1989	1,605	1985

Engineer in Training Test (EIT)		
Year	Students	Percent Passing
1984	910	63.1%
1988	746	63.5%
1989	997	55.4%

National Council Licensure Exam for Nursing (NCLEX)		
Year	Students	Percent Passing
1984	536	89.7%
1988	521	84.1%
1989	485	84.9%

The job placement rate of graduates from the public two-year schools in program-related positions has shown a remarkable increase. In 1984, data were collected 90 days following graduation. In 1988, this period was extended to 180 days to lessen the effect of seasonal hiring.

Community Colleges		
Year	Students	Percentage
1984	2,559	66%
1988	2,268	85%
1989	2,818	87%

Area Vocational Technical Schools		
Year	Students	Percentage
1984	3,185	65%
1988	2,938	75%
1989	2,968	83%

To have quality postsecondary education programs, measurable student progress, and efficiency in the use of public resources, we must ensure appropriate incentives for success or be prepared to pay real consequences for failure. Since 1979, Tennessee has led the nation by having in place a statewide assessment program for public four-year universities and two-year colleges. Tennessee's Performance Funding Program has become a national model for assessment and accountability in higher education.

The Performance Funding Program awards funds to institutions, beyond their regular budgets, on the basis of performance. Six standards are used to assess institutional performance: program accreditation, major field assessment, undergraduate general education outcomes, alumni satisfaction surveys, corrective measures, and an option of developing and piloting assessment instruments unique to each campus. New guidelines were adopted by the Higher Education Commission in July 1987. The two principal differences between the new standards and the previous ones lie in placing more weight on performance and in raising the assessment criteria.

Since implementation of the program in 1979, each college and university has made remarkable progress in achieving performance goals. Improvements are based on where an institution started and what it achieved during the academic year; thus, each campus competes only with itself for additional funding.

A high priority in improving the quality of postsecondary education in the state has been to provide teachers and students with appropriate tools for teaching and learning. Following extensive evaluation of the instructional and research equipment needs of the institutions of higher education, the Legislature appropriated \$10 million in 1988-89 and again in 1989-90 as the first phase in a program where teaching and research equipment will be continually evaluated and systematically maintained or replaced with state-of-the-art equipment. The funds are distributed among and are matched by the institutions.

Since 1984-85, \$15.2 million of state funds has been appropriated to the area vocational-technical schools to upgrade and provide state-of-the-art equipment. The continued maintenance and improvement of equipment allows students to simulate actual work environment situations using the latest technologies. Upon completion of their studies, the graduates of these programs arrive on the job ready to go to work.

Since 1977, Tennessee has had in place a successful capital renewal program which has become a national model. Across the country, campuses are facing major problems associated with outdated and decaying buildings, but this is not the case in Tennessee. The facilities evaluation study is a comprehensive review of all the buildings on the campuses of Tennessee's institutions of higher education. The program has given credibility to higher education's requests for funding of capital maintenance projects. The current annual funding level for this program is \$10.7 million. The primary objective of the program is to encourage the proper maintenance of state property by identifying any facility requiring capital outlay expenditures for renovation and repair within five years and making that facility a part of a long-range plan with the projects scheduled in order of priority.

Partnerships with Business, Government, Communities, and Families

The schoolhouse in America traditionally has provided a link between the family unit and the community. During the 1980's, not only the schools but also private agencies, employers, and government at all levels have become involved to link families and communities with what is becoming more and more a global society. A major effort during this decade has been to strengthen these ties by developing a new generation of partnerships among schools, businesses, government, communities, and families.

Programs in K-12 education include Partners in Education, the Governor's A+ Awards for Community Partnerships and Involvement, School Age Childcare, Governor's Study Partners Program, the Governor's Alliance for a Drug Free Tennessee, and Workplace Adult Literacy. In higher education the most successful statewide programs include the Centers of Excellence, the Centers of Emphasis, and the Chairs of Excellence. These innovative programs have afforded opportunities for the community

and families to become involved in education in ways not possible before. They have also enhanced the quality of academic programs, broadened the constituency of the schools, colleges, and universities, and expanded employment and training opportunities. Much effort has been given to ensure that the individual, elementary-age student through senior citizen, who lacks basic skills be provided an opportunity to acquire them and, thus, become a productive citizen. Some specific examples of the success of these programs follow:

In both 1988 and 1989, a statewide conference on **Partners in Education** was held by the State Department of Education. A similar statewide conference on family involvement was held in 1987 and 1988. Over one-half of the states' 140 public school systems have initiated new family and community involvement efforts.

During the 1980's, 24 Tennessee elementary and secondary schools have been **Recognized Nationally in School Recognition Programs** by the U.S. Department of Education for their excellence in programs (Appendix C). Ten communities and their school systems were recognized in 1989 for the new **Governor's A+ Award for Community Commitments to Excellence in Education** (Appendix D). The awards were based upon a thorough evaluation of the extent of community-school partnerships designed to join families, community leaders, business, and interested citizens in enhancing the quality of education in the public schools. One of the important features of the award is the community commitment to implementing programs under the **Governor's Alliance for a Drug Free Tennessee**. All school systems in the state participate in this effort to educate Tennessee's children about the dangers of drug and alcohol abuse.

In 1988, the General Assembly adopted legislation to allow local school systems to operate **school-age childcare programs** to meet the needs of children of working parents before and/or after school. During the current school year, a total of 35 school systems, with 110 schools serving as childcare sites, have initiated new programs. Approximately 4,000 children are being served through these programs. Most of these programs are in rural areas of the state. There are 20 more school systems seeking financial support to begin before and after school childcare programs. In addition, across the state there are 156 schools with programs operated by community not-for-profit agencies and 9 schools with programs operated by parent boards. Those programs are located primarily in larger communities or urban areas.

The **Governor's Study Partners Program** focuses on utilizing academically capable students as peer tutors for those students who have been identified as potential dropouts. There were 30 elementary and secondary schools involved in the program during the initial pilot year of 1988-89. One hundred and twenty schools are participating in the program during the 1989-90 school year.

Tennessee has initiated a statewide effort to increase the level of adult literacy. Central to this effort has been the involvement of employers. Currently 131 businesses and industries have initiated **workplace adult literacy programs**. Over 1,000 employees are involved. Sixty more employers are targeted to begin programs pending state funding. Area vocational schools and community colleges cooperate with the employers and the State Department of Education in providing these site-based programs aimed at basic literacy, GED preparation, and technical training.

The **Centers of Excellence**, **Centers of Emphasis**, and **Chairs of Excellence** have proven to be magnets attracting additional resources to our colleges and universities in Tennessee. The success of these quality initiatives strongly affirms the state's investment in the programs.

The Centers of Excellence (Appendix E) are located at the state's public universities and focus extensive resources on the advancement of knowledge through high quality research, instruction, and public service. The program implemented in 1984, encourages linkages with business and industry, government, the community, and alumni by requiring that the institutions match every \$2 of state funding with \$1 of gifts, grants, contracts, or reallocation of institutional funds. Tennessee has appropriated over \$100 million to this program in five years. In 1989, there are 27 Centers located throughout the state with 25 of these having achieved the designation "Accomplished Center." The state's rate of return on its investment in this high quality program will continually increase as the Centers gain regional, national, and international recognition and respect.

The Centers of Emphasis (Appendix F) program was initiated in 1986 to achieve high quality instruction at the two-year community colleges and technical institutes. These Centers have been extremely successful in building community support by responding to the needs of the students and providing technical assistance to businesses and industries located in the service area of the schools. In fact, the two-year institutions have taken the lead in establishing partnerships with business and industry to train workers in such areas as computer integrated manufacturing, CAD-CAM, robotics, health related sciences, information systems, and electronics. The institutions are required to match every \$2 of state funding with \$1 of funds raised or reallocated. There are 13 Centers of Emphasis in operation across the state.

The Chairs of Excellence (Appendix G) program originated in 1984 when the General Assembly appropriated \$10 million to an endowment fund expressly for the purpose of enticing eminent scholars to come to Tennessee to teach, conduct research, provide public service, and to perform other scholarly activities. Equal amounts of the endowment are assigned to each of the two governing boards of public higher education. The two systems assign to each campus the number of Chairs for which the campus is eligible. The money from the endowment for each Chair, ranging from \$1 million to \$1.25 million per Chair must be matched on a dollar-for-dollar basis by the institution. At least half of the match must come from private sources. The Chairs of Excellence program includes 79 approved Chairs, 79 matched Chairs, and 48 filled Chairs. The program is currently funded at a level of \$43 million in appropriations of which \$42.1 million has been matched by institutions.

The Centers of Excellence, Centers of Emphasis, and Chairs of Excellence programs are largely responsible for the dramatic increase in voluntary financial support for education during the 1980's in Tennessee. This increase is especially significant, since nationwide the donations earmarked for education fell during 1989 for the first time since 1975 to \$9.78 billion, a decline of 5.15%. Highlights of a few of the success stories in obtaining financial support at the various campuses across the state follow.

At Dyersburg State Community College, more than \$300,000 was raised to support instructional and academic programs.

During 1988-89, Cleveland State Community College raised approximately \$220,000 in private funds for scholarships and has underway an ambitious campaign to culminate in 1991-92 with a total goal of \$2.5 million.

The University of Tennessee has a major library endowment program underway to raise \$6 million to support library needs.

The agriculture program at The University of Tennessee has been very successful in fund raising and has just completed a \$10 million endowment program.

A capital campaign at Tennessee Technological University raised more than 2.5 million for Chairs of Excellence and \$700,000 for student scholarships, a distinguished lecture series, and faculty development.

Sponsored funding for research at state universities has increased steadily over the past five years, in spite of increased competition for such funding. The total amount has more than doubled from the average during 1980-84 (\$36,474,787) to the actual in 1988-89 (\$81,180,533). This increase is consistent among the institutions.

<u>Year</u>	<u>Amount</u>
1980-84	\$36,474,787
1985	47,439,564
1988	74,486,485
1989	81,180,533

Over the last ten years, federal allocations to higher education institutions for research and development have increased in the science and engineering areas. One example of **external research funding** in Tennessee is the Gammarsphere project.

The United States Department of Energy has recommended that Tennessee receive a \$16 million Gammarsphere project. This is a cooperative project with the Oak Ridge National Laboratory, The University of Tennessee at Knoxville, and Vanderbilt University. An important part of the success of that competition is Governor McWherter's commitment to provide \$800,000 as the state's share and the willingness of the institutions to also share in the financial support for this research project.

Professional Development for Teachers and School Leaders

Reforms underway in teaching and teacher education programs in Tennessee will ensure that our public schools have teachers and leaders who are respected and supported by students, parents, and communities. We have established performance-oriented educational policies with clear, specific, challenging goals. As an incentive for teachers and schools, emphasis needs to be placed on recognizing and rewarding schools, teachers, and administrators where the students make substantial progress toward attaining these goals.

Tennessee has focused on enhancing the status and success of teachers by providing competitive salaries; ensuring teachers a professional working environment; evaluating, improving, and rewarding teacher performance; and strengthening preparation programs for beginning and experienced teachers. Tennessee has adopted policies to enhance the teaching profession and to improve teacher education. The partnership between the State Board of Education and the Tennessee Higher Education Commission has been especially productive in recognizing the important status of the teaching profession, both on campus and in the community.

Teacher licensure and program standards, based on knowledge and performance of graduates, have been strengthened.

Teachers' salaries in Tennessee have increased to a point near the average of teacher salaries in the southeast.

Efforts to improve the working environment of teachers include the provision of educational assistants for teachers in grades K-3, the reduction of non-teaching tasks to allow more time to teach, provision of additional planning time and a duty-free lunch period for teachers in the elementary grades.

All teachers are involved in systematic evaluations designed to identify strengths, areas for improvement, and opportunities for professional growth. In addition, the Career Ladder program provides teachers with an opportunity to seek both merit pay and additional paid work through extended contracts. The state has committed over \$100 million to this effort.

Tennessee has expanded greatly the professional development opportunities for teachers and school leaders. Teachers may attend academies in writing, foreign language, the arts, and the Educational Equality Project, as well as special programs focused on the needs of gifted and special education students. Principals and supervisors attend special academies and institutes, while superintendents have an executive training program available to support their system-wide leadership role.

The State Board of Education and the Higher Education Commission adopted a new **Teacher Education Policy** on January 29, 1988. The policy, which is consistent with the goals contained in the Southern Regional Education Board's *Goals for Education: Challenge 2000*, will enhance the academic experience of teacher candidates by enabling all teachers to have an academic major and professional preparation for teaching. Institutions of higher education and local school systems will form partnerships to provide practical experiences and induction programs for teacher candidates and beginning teachers. The policy also encourages qualified college graduates who have no prior teacher preparation to enter the profession by providing post-baccalaureate teacher education programs. The revised programs will begin with students entering in fall 1990.

Much has been written over the last several years about the "proper" education and preparation of the classroom teacher. In Tennessee, the emphasis has been focused primarily on teacher education programs at higher education institutions. Teacher education programs will be approved in accordance with National Council on the Accreditation of Teacher Education (NCATE) standards or equivalent state standards. Continuing approval of teacher education programs will be based, in part, on the performance of an institution's graduates.

During 1989, representatives from the State Department of Education, the State Board of Education, and the Tennessee Higher Education Commission, under the National Governor's Association (NGA) grant "Tennessee Teachers: Today and Tomorrow," worked to complete a publication dealing with teacher education reform initiatives in Tennessee and a supply and demand study. These two projects will be finished in early 1990.

Special efforts are being made to recruit more minorities into the teaching profession. The **Tennessee Task Force on the Supply of Minority Teachers**, working throughout 1988 and 1989, proposed initiatives to encourage minorities to become teachers. Several of the recommendations of the Task Force have been adopted.

The Legislature funded in 1989 a **Matching Grant Program** to establish pilot projects designed to encourage non-traditional minority students, such as classroom teacher assistants, substitute teachers, and college graduates without teacher certification, to become certified teachers.

The Legislature also authorized a **Minority Teaching Fellows Program** which provides service award fellowships (\$5,000) annually to talented minority students from Tennessee interested in preparing to be teachers.

The State Department of Education and the Tennessee Education Association formed a collaborative initiative in 1988, **Partnerships to Assist Schools Success (PASS)**, to motivate minority high school students to consider a career in teaching.

The higher education institutions and the State Department of Education continue to investigate the feasibility of implementing other initiatives, such as the **Teacher Cadet Program** and a **Job Registry**, which would expand the pool of minority teachers.

PRIORITIES FOR THE 1990's

Both the State Board of Education and the Tennessee Higher Education Commission have prepared bold master plans to lead Tennessee into the 1990's. Priorities have been established by leaders at both levels of Tennessee's public education system.

Master Plan for Public Education, Grades K-12

The State Board of Education annually submits to the Governor and the General Assembly a Master Plan for Public Education designed to accomplish the Board's mission: to have schools in Tennessee among the best in the nation. In the 1990 Master Plan, the State Board of Education has identified the following key result areas: student achievement, teaching, teacher education, leadership and management, family/community involvement, adult literacy, and funding. For each of the key result areas, the Board has identified objectives, strategies to accomplish the objectives, and ways to measure progress. Progress in these areas require the following state initiatives:

Establish a funding formula designed to assure sufficient revenue to support the costs of a Basic Education Program in all public schools.

Improve curriculum and instructional programs for early childhood, early elementary grades, middle grades, and high school to ensure that all children complete school and students are prepared to begin college level work or to advance successfully into job opportunities.

Assess school performance and use the information to improve education. Focus on results and give local school systems greater latitude in achieving results.

Encourage expanded use of technology in instructional programs, professional development, and administration of schools.

Enhance the teaching profession and make teaching a more attractive career choice by maintaining salaries for instructional personnel that are competitive with those in the southeast and by ensuring a professional working environment for teachers.

Strengthen teacher education by expanding recruitment efforts, improving the academic experience and implementing a logical induction process for new teachers.

Require local school boards to develop long-range plans to include annual needs assessments, goals, objectives, and strategies. Improve the training of local school board members.

Encourage family and community involvement in schools and expand school/community partnerships.

Strengthen programs to reduce adult illiteracy.

Master Plan for Higher Education

The Future of Tennessee: Higher Education 1987-1993, developed in 1986 by a Task Force comprised of representatives from the campuses, the two governing boards, and the Commission staff, has as its foundation a set of five principles and achievement targets. Implementing these principles and achieving the targets will guarantee a productive future for higher education in Tennessee. The five principles are listed below:

Tennessee's colleges and universities, collectively, shall address the needs of the people and goals of the state, and each institution's mission shall be unique and shall focus on the strengths of the respective institution.

Undergraduate education shall address the tasks of preparing students to think critically, interpret knowledge, and function effectively and productively as members of society and as professionals in the work force.

Higher education shall be linked functionally to elementary, secondary, adult, and continuing education. Furthermore, in order to enhance the competitive edge of Tennessee's economy, higher education shall be a full partner with business, industry, and related governmental agencies.

Higher education in Tennessee shall be carried out with uncompromising high quality.

Higher education in Tennessee shall be for all citizens who are interested and academically qualified.

The first target of the master plan is to "develop and implement mission statements which clearly establish differentiated missions for each institution." Successful leaders in education, as in the business world, know they cannot be all things to all people. Using this rationale, the institutions realize they cannot excel in every area of research, teaching, and public service. Those institutions that identify their strengths, develop clear, concise mission statements, and communicate them well to their constituents are most likely to succeed in the 1990's and become nationally known for that particular area of expertise.

Each of the four-year and two-year institutions will develop this year a unique, visionary mission statement designed to guide that institution in achieving specific objectives and meeting specific goals. The willingness to change and accept new challenges constitutes a magnificent opportunity for our public colleges and universities. The ability of an institution to change to meet the demands of society is best exemplified by the transformation of two technical institutes--Pellissippi State Technical Community College and Tri Cities State Technical Institute--into comprehensive technical community colleges.

Looking Toward the Future

This annual report has repeatedly referred to the strength of Tennessee's economic development and quality of life as being dependent on developing the best education system possible. Success or failure depends a great deal on the public's attitude toward new ideas or revival of old ideas. Any change in the "usual" way of doing things brings about reluctance to support the unknown or fear of failure. One example of a hurdle that policy makers have had to overcome in the public's acceptance of change in Tennessee during the 1980's has been the requirement that students must take a foreign language to enter Tennessee's public universities.

The American Council on Education, realizing that learning other languages is an essential part of an education for today's and tomorrow's world, has issued a policy statement *What We Can't Say Can Hurt Us: A call for foreign language competence by the year 2000*. Also, the National Governor's Association, 1989, *America in Transition: The International Frontier* states that "all college and university graduates must be knowledgeable about the broader world and conversant in another language." Tennessee is not alone in its ambitious endeavor to have every baccalaureate holder be competent in a second language.

Tennessee has been a leader in foreign language instruction by establishing in 1986 the Tennessee Foreign Language Institute. The Institute has cooperated with business and industry, government agencies, elementary and secondary education, and institutions of higher education on several projects during 1989. The projects with the universities represent very different ways in which higher education can assist in developing programs to meet the growing interest in early language learning. Examples of the projects which involve the creation of new programs for teaching foreign languages in elementary schools follow:

Formation of an Advisory Board for a Spanish video project, AMIGOS, at The University of Tennessee, Knoxville, Center for Extended Learning;

Development of a K-12 curriculum for the Chattanooga Schools of Arts and Sciences through a federally funded project with The University of Tennessee at Chattanooga;

Implementation of an Immersion Workshop in French or Spanish for Elementary Teachers at Middle Tennessee State University funded through a federal grant administered by the Higher Education Commission; and

Sponsorship of a grants-writing workshop for university faculty during 1989 which should result in an increase in the numbers of faculty and departments submitting grant proposals to federal and private agencies.

CHALLENGES FOR THE 21st CENTURY

The citizens of Tennessee can be proud of the many dedicated teachers, administrators, staff, volunteers, government officials, policy makers, and community leaders responsible for providing young people of Tennessee an opportunity to get the best possible education our public schools, colleges, and universities can offer. But we must not be content with what we have achieved thus far. As we plan for, dream about, and anticipate an exciting future and a better quality of life for all Tennesseans in this last decade of the 20th century, we must recognize, acknowledge, and, indeed, embrace the opportunity to effect even more changes to meet the challenges of the next century.

Policy makers and educational leaders across Tennessee and the country are presently engulfed in goal-setting activities and the establishment of indicators of progress. In Tennessee, much of this activity is in response to a bill passed by the 1989 General Assembly which established TENNESSEE CHALLENGE 2000.

In accordance with a process established by the General Assembly, the Commissioner of Education will present to the Select Oversight Committee on Education a set of goals in early 1990. The committee will recommend long-term, quantifiable goals for K-12 education to the State Board of Education. The Board's Master Plan for 1991 will incorporate measurable goals and procedures to gauge progress.

The Tennessee Higher Education Commission, in consort with the University of Tennessee Board of Trustees and the Tennessee Board of Regents, has spent a great deal of time in 1989 reviewing higher education goals and objectives. Representatives from the two governing boards, the institutions, and the Commission have developed long-term quantitative and qualitative goals for higher education. The culmination of their work is contained in the document *Tennessee Challenge 2000*. The Executive Director of the Commission will present a preliminary draft of the proposed goals to the Select Oversight Committee on Education of the General Assembly for its review by February 15, 1990.

Shaping the Policy Agenda

The changing demographics of our nation and of Tennessee must be considered when setting goals and developing long-range plans for educational reforms. We know that today's and tomorrow's post-technological society demands citizens who read with understanding, discern complex relationships, and think critically. Our public education system must be prepared to meet this demand. Some national demographics and predictions for Tennessee public education follow.

National Demographics

The number of young adults in the population will decline. The number of births in the 1990's is expected to push public school enrollment to 44 million by 2000, up 4 million from today's level.

The at-risk segment of the population will continue to grow. The average American makes just over \$17,000 a year now, up from \$5,000 in 1965. But after inflation, each workers' income averages only \$140 more yearly than it did 25 years ago. This segment of society has become the "working poor."

The traditional image of the American family will continue to fade, and dual-career and single-parent homes will continue to increase.

By the end of the century, 108,000 people will be 100 or older, up from 54,000 in 1988.

By the year 2015, there will be only three workers for each retired person, and at least one of those three will be minority. Many of these available workers will come from low-income family backgrounds.

The percentage of poor and minority children in public schools will continue to increase.

The percentage of white males in the workforce will rapidly decline.

By the year 2000, more than 80% of women age 25 to 54 will work outside the home compared with 70% today.

By the year 2000, men will still earn more professional degrees than women, but women will earn more associate's, bachelor's, master's, and doctoral degrees than men.

By 2010, a shortfall of 560,000 scientists and engineers is projected.

The number of PhD's entering the teaching profession will continue to decline sharply following the trend of the past 20 years. While the decline will represent all fields of study, the most serious decline will be in the social sciences and among students receiving doctorates in education.

Nearly a third of the population will have a college education by the year 2000, compared to 27% in 1989, because of employer demands for highly educated and skilled employees.

The traditional college-age population will continue to decrease and the 25 and older, part-time student population will continue to increase.

Predictions for Tennessee Public Education

The electronic classroom will become a reality in Tennessee with communications satellites linking teachers and students located in the metropolitan areas with those in the rural areas.

A statewide library network using telecommunications technology will provide students access to materials in other parts of the state.

The quality of public education available to every Tennessean will continue to improve as accountability measures are strengthened and high performance of students and teachers is rewarded.

Programs and course offerings at the higher education institutions will be reviewed annually to ensure efforts are not duplicated.

Because of the importance of research to the long-term economy of Tennessee, greater attention and resources will be directed toward research efforts at the universities and toward laboratory equipment at all levels of education.

Financial investment in public education will be increased at all levels, particularly for K-12 schools, and will also provide programs at the preschool level for at-risk students.

The goals developed for the 21st century by K-12 and Higher Education will be adopted and incorporated into the respective master plans.

A system of lifelong learning will be developed to provide a second chance for older students and career development support for Tennessee's workforce.

A closer collaboration between higher education and the public schools will improve student participation, retention, and graduation rates, especially for black students.

A program to involve students in community service activities will provide financial support to students and lessen dependence on higher education loans.

A financial and job incentive program for students who attain academic goals will drastically reduce the dropout rates in the public schools.

A state program of incentives to encourage industry to invest in public education programs, particularly in providing tools and equipment for training, will ensure success for students entering the workforce following high school.

The state's public universities will have increased recognition and capacity to conduct research in areas vital to business, industry, government, and education.

The reformed teacher education programs will ensure an adequately prepared and committed instructional staff for both K-12 and higher education. Recognition and staff development programs, including academies and incentive grants, will be available to support instructional personnel in schools, colleges, and universities.

The international education and foreign language instruction in public schools, colleges, and universities will include special programs designed to increase opportunities for Tennessee students to study in other cultures by participating in foreign exchange programs.

The national assessment instruments and those devised by the state will reflect a new emphasis on high-level thinking skills.

Many educational programs currently in place will require refinement, and in some instances, redirection of resources to accomplish goals. For example, we must find new ways to give students at all levels of education more freedom and incentive for high-level thinking if we are to improve their capacity for creative and critical thinking, analysis, and problem solving. Currently, most teaching materials do not support instruction in high-level thinking skills. Some teachers will require further education to learn how to teach these thinking skills well. As an added challenge, this change in curriculum focus will occur at the same time that teachers will face an increasingly diverse population of students.

Tennessee will meet the challenges of the next century with adequate and proper planning. The state's policymakers and educational leaders recognize that the rapid and continual change in technology, including semiconductivity, robotics, silicon chips, fiber optics, digital electronics, supercomputing, high definition television, biotechnology, and telecommunications, will affect education and the way we do business in the future. National and international companies seek to relocate in areas where there are educated workers, excellent educational institutions, entrepreneurial opportunities, and an attractive quality of life. We must strengthen our competitiveness in economic development efforts by having in place programs which support networking and resource sharing among local schools, corporations, foundations, higher education institutions, and government agencies.

During the next decade, Tennessee must ensure an educational system which supports the economy, quality of life, and aspirations of its citizens. The Board and Commission reaffirm their resolve to provide the necessary policy leadership to K-12 and higher education to meet these challenges.

APPENDIX A

TENNESSEE HIGH SCHOOL GRADUATION REQUIREMENTS

Courses	Units
English Language Arts	4
Mathematics	2
Science	2
American History	1
¹ Economics	$\frac{1}{2}$
Physical Education	1
Health Education	$\frac{1}{2}$
Total Required Courses	11
Elective Courses	<u>9</u>
Total for Graduation	20

¹ Students may meet this requirement by:

1. One semester in Economics
2. Out-of-school experiences through Junior Achievement
3. Marketing Education

APPENDIX B

MINIMUM HIGH SCHOOL COURSE REQUIREMENTS FOR REGULAR UNDERGRADUATE ADMISSION TO PUBLIC UNIVERSITIES FALL 1989

Tennessee Board of Regents Institutions

Subject Area	Required Units ²
English	4
Visual and/or Performing Arts, including a survey course or participation in one or more of the arts (music, dance, theatre, visual arts)	1 ³
Algebra I and II	2
Geometry or other advanced math course with geometry as a major component	1
Natural/Physical Science, including at least one unit, with lab, of biology, chemistry, or physics	2
Social Studies, including history, government, geography, sociology, psychology, economics, or anthropology	1
United States History	1
A single Foreign Language	2

The University of Tennessee Institutions

English	4
Algebra I and II	2
Geometry, trigonometry, advanced mathematics, or calculus	1
Natural Science, including at least one unit of biology, chemistry, or physics	2
European history, world history, or world geography	1
American History	1
A single Foreign Language	2

² One unit constitutes one academic year of high school study.

³ Deferred until Fall 1993.

APPENDIX C

TENNESSEE SCHOOLS RECOGNIZED NATIONALLY IN THE U. S. DEPARTMENT OF EDUCATION'S SCHOOL RECOGNITION PROGRAMS

I. SECONDARY SCHOOL RECOGNITION PROGRAM

1982-83

School System

Snowden Middle School
Collierville Middle School
Cleveland High School

Memphis
Shelby County
Cleveland

1984-85

Hillsboro High School
Hixson High School

Nashville
Chattanooga

1986-87

Central High School
Brown Middle School
Farragut Middle School
Haywood High School
Bradley County High School

Hamilton County
Hamilton County
Knox County
Haywood County
Bradley County

1988-89

Glenclyff High School
Alvin C. York High School

Nashville
State Special School

II. ELEMENTARY SCHOOL RECOGNITION PROGRAM

1985-86

Dodson Elementary School
Eakin Elementary School
Grahamwood Elementary School
Ingleside Elementary School
Thrasher Elementary School
Snow Hill Elementary School

Nashville
Nashville
Memphis
Athens
Hamilton County
Hamilton County

1987-88

Millington South Elementary School
Farmington Elementary School
Cedar Bluff Elementary School
Farragut Intermediate School
Miller Perry Elementary School
Lake View Elementary School

Shelby County
Shelby County
Knox County
Knox County
Sullivan County
Nashville

APPENDIX D

GREAT SCHOOLS IN TENNESSEE PROGRAM GOVERNOR'S AWARD

I. 1985-86

School System

Rock Creek Elementary School	Franklin County
Hillsboro High School	Nashville
Richview Middle School	Montgomery County
Alcoa Elementary School	Alcoa
Dobyns Bennett High School	Kingsport
Hixson Junior High School	Hamilton County
Grahamwood Elementary School	Memphis
Germantown High School	Shelby County
Caywood Elementary School	Lexington
Hamilton Junior High School	Memphis

II. 1986-97

Ingleside Elementary School	Athens
Holston Middle School	Sullivan County
Oak Ridge High School	Oak Ridge
Scott County High School	Scott County
Celina Elementary School	Clay County
Bellevue Middle School	Nashville
Tullahoma High School	Tullahoma
Inman Elementary School	Paris
White Station Junior High School	Memphis
Adamsville High School	McNairy County

GOVERNOR'S A+ AWARDS FOR COMMUNITY COMMITMENTS TO EXCELLENCE IN EDUCATION

1989 Recipients

Alcoa, Blount County, and Maryville
Dyer County
Hamilton County
Johnson City
Kingsport
Lawrence County
McNairy County
Murfreesboro and Rutherford County
Oak Ridge
Putnam County
Warren County
Weakley County

APPENDIX E

CENTERS OF EXCELLENCE

Austin Peay State University

- Center for the Creative Arts¹
- Center for Research in Field Biology¹

East Tennessee State University

- Center for Appalachian Studies and Services¹
- Center for Excellence in Early Childhood Learning and Development¹
- Center for Excellence in Banking

Memphis State University

- Center for Research and Innovative Services for the Communicatively Impaired¹
- Center for Egyptian Art and Archaeology¹
- Center for Teacher Education¹
- Center for Applied Psychological Research¹
- Center for Earthquake Research and Information¹

Middle Tennessee State University

- Center for Excellence in Historic Preservation¹
- Center for Popular Music Research¹

Tennessee State University

- Center for Research in Basic Skills¹
- Center for Information Systems Engineering and Management

Tennessee Technological University

- Center for Management, Utilization, and Protection of Water Resources¹
- Center for Manufacturing Research and Technology Utilization¹
- Center for Electric Power -- Modeling, Simulation, and Control¹

University of Tennessee at Chattanooga

- Center for Computer Applications¹

University of Tennessee at Knoxville

- The Science Alliance¹
- The Center for Materials Processing¹
- The Waste Management Research and Education Institute¹

University of Tennessee at Martin

- Center for the Enrichment of Science and Mathematics Teaching¹

University of Tennessee at Memphis

- The Molecular Resource Center¹
- Center for Neuroscience¹
- Center for Pediatric Pharmacokinetics and Therapeutics¹

University of Tennessee Institute of Agriculture

- Center for Livestock Diseases and Human Health¹

University of Tennessee Space Institute

- Center for Laser Applications¹

¹ Accomplished Centers of Excellence.

APPENDIX F
CENTERS OF EMPHASIS

Chattanooga State Technical Community College
Center for Advanced Technology

Cleveland State Community College
Nursing Laboratory and Multimedia Center

Columbia State Community College
Center for Biology and Nursing

Dyersburg State Community College
Center for Industrial Automation

Motlow State Community College
Center for Information Systems

Nashville State Technical Institute
Center for Computer-Based and Classical Instrumentation

Pellissippi State Technical Community College
Center for Design and Production Automation

Roane State Community College
Center for Writing

Shelby State Community College
Center for Academic Collaboration

State Technical Institute at Memphis
Center for Microprocessor Applications and Computer-Aided Engineering

Tri-Cities State Technical Institute
Center for Computer Software/Hardware Technology

Volunteer State Community College
Center for Emergency Medical Technology

Walters State Community College
Center for Criminal Justice Technology

APPENDIX G

CHAIRS OF EXCELLENCE

Austin Peay State University

Roy Acuff Chair in Creative Arts
Harper/Bourne Chair in Business
APSU Foundation Chair in Free Enterprise

East Tennessee State University

Cecile Cox Quillen Chair in Geriatric Medicine
AFG Industries Chair in Business and Technology
Allen and Ruth Harris Chair in Business
Carroll H. Long Chair in Surgical Research
Paul Dishner Chair in Medicine

Memphis State University

Herbert Herff Chair in Law
Unnamed Chair in Molecular Biology
Morris F. Fogelman Chair in Real Estate
Sales & Marketing Chair in Sales
Thompson-Hill Chair in Accountancy
Arthur Anderson & Company Chair in Accounting II
Lillian/Morrie Morris Chair in Philosophy
Herff Chair in Biomedical Engineering
Bornblum Chair in Judaic Studies
Wunderlich Chair in Finance
Shelby County Government Chair in International Economics
Robert Wang Chair in International Business
Unnamed Chair in Free Enterprise Management
Lillian/Morrie Morris Chair in English Poetry
Herbert Herff Computer Engineering
William and Ruth Loewenberg Chair in Nursing
Dorothy K. Hohenberg Chair in Art
Federal Express Chair in Management Information Systems

Middle Tennessee State University

Jennings A. Jones Chair in Free Enterprise
John Seigenthaler Chair in 1st Amendment Studies
Carl Adams Chair in Health Care Services
National HealthCorp Chair in Nursing
Robert E. and Georgianna West Russell Chair in Manufacturing
Katherine Davis Murfree Chair in Dyslexic Studies

Tennessee State University

2 Chairs Not Designated

Tennessee Technological University

J. E. Owen Chair in Business Administration
William Eugene Mayberry Chair in Business Administration

University of Tennessee at Chattanooga

Burkett Miller Chair in Management & Technology
American National Bank & Trust Chair in Humanities
Provident Insurance Company Chair in Applied Math
George R. West, Jr. Chair in Communications & Public Policy
Unnamed Chair in Judaic Studies
Walter M. Cline, Jr. Chair in Rehabilitation Technology
J. Burton Frierson Chair in Business Leadership
Clarence E. Harris Chair in Business
Lyndhurst Foundation Chair in Arts Education

University of Tennessee at Knoxville

Ivan Racheff Chair in Ornamental Horticulture
Hodges Chair in English
Ivan Racheff Chair in Materials Science
Forrest & Patsy Shumway Chair in Romance Languages
Robert Condra Chair in Computer Integrated Engineering & Manufacturing
Robert Condra Chair in Power Electronics Application
Pilot Oil Corporation Chair in Management
J. Fred Holly Chair in Political Economy
Schmitt Chair in History
Unnamed Chair in Science, Technology & Medical Writing
Henry Goodrich Chair in Civil Engineering
Clayton Homes Chair in Finance
Illinois Central Corporation Chair in Policy Studies
Bernard Blasingame Chair in Agricultural Policy

University of Tennessee at Martin

Tom E. Hendrix Chair in Free Enterprise & Economics
Horace and Sara Dunagan Chair in Banking
Gil Parker Chair in Food & Fiber Industries

University of Tennessee at Memphis

Harriet S. VanVleet Chair in Microbiology & Immunology
Harriet S. VanVleet Chair in Pharmacology
Harriet S. VanVleet Chair in Biochemistry
Harriet S. VanVleet Chair in Virology
E. Eric Muirhead Chair in Pathology
Faculty Chair in Obstetrics & Gynecology
LeBonheur Chair in Pediatrics
LeBonheur Chair in Pediatrics
Memphis Crippled Children's Hospital Foundation Chair in Biomedical Engineering
J.R. Hyde Chair in Rehabilitation Engineering
Thomas A Gerwin Chair in Physiology
Plough Foundation Chair in Pediatrics
William and Dorothy Dunavant Chair in Pediatrics
First Tennessee Chair in Pediatrics
Federal Express Chair in Pediatrics
Semmes-Murphey Chair in Neurology
Maury W. Bronstein Chair in Cardiovascular Physiology
Goodman Chair in Medicine

University of Tennessee Space Institute

Edward J. and Carolyn P. Boling Chair in Space Propulsion